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NOV 18 2005

Patent Application

Inventor(s): Byers et al.

Case No.: Byers 44-6

Serial No.: 09/932,707

Filing Date: 08/17/2001

Examiner: Agustin Bello

Art Unit: 2633

Title: Installation of Processing Units into a Stored Program Controlled System Wherein
the Component Processing Units are Interconnected Via Free Space Optics

I hereby certify that this correspondence is being facsimile
transmitted to the United States Patent and Trademark Office
on November 18, 2005.


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SIR:

Pre-Appeal Brief Request for Review

Applicant requests review of the final rejection of this application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reasons stated on the attached sheets (not more than 5 pages).

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Remarks

Applicant requests Pre-Appeal Brief Review of the final office action for reasons stated below.

Claim 1 stands rejected under 35 U.S.C. §102 as being anticipated by Hamanaka (U.S. Patent No. 5,500,523). This rejection should be reversed as being based on an error of fact and/or failure to state a prima facie ground for rejection.

Claim 1 is directed to a processing unit where communications among the processing units is effected by a free space beam line. The processing unit includes an aperture for passing the beam line and is configured to permit **installation and removal of the processing unit without blocking the beam line**. A means is provided in each aperture for receiving optically encoded signals from the beam line after installation. Reference may be made to figures 11-12 of the subject application for illustrative, but not limiting, examples. In an embodiment of the present invention, the installation or removal of any one board does not cause a disruption of the light beam to any of the other boards.

In the Office Action, claim 1 was rejected as being anticipated by Hamanaka with regard to its FIGs. 2 and 4. It is the examiner holds that the circuit board (11 in FIG. 2 and 10 in FIG. 4 of Hamanaka) does not have a bottom edge that extends below the optic windows 31, 32 such that the insertion of board 10 into a slot 20a of motherboard 20 will not interrupt optical beams generated by LED arrays 60. It is stated in the final Office Action:

"the examiner believes that the bottom cross-hatched area shown in Hamanaka's FIG. 2 does not extend the entire length of the circuit and does not form the bottom edge of the circuit board. In fact, the possibility exists that the cross-hatched area shown in FIG. 2 and 4 is simply a leg or stand-off used to properly position the board at a desired height from the element 50 shown in FIG. 4 and 5, and that the window portion of the processing unit forms a "T" around the stand-off legs. This possibility is supported by Hamanaka's disclosure that the "electronic circuit board 11 has an opening 11a defined in one end thereof."

Emphasis added by applicant.

First, describing an object being located at "an end" of a structure is not sufficiently descriptive of a specific structure to inherently require the structure suggested by the examiner, i.e. the hole intersecting an edge of the circuit board.

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) Emphasis added to this quotation found in the MPEP 2112.

The "possibility" that Hamanaka "might have" the structure suggested by the examiner is clearly conjecture that is impermissibly based on the hindsight teachings of the present invention and is not legally (see authority above) permitted. Hence a prima facie ground has not been established to support the rejection.

Hamanaka teaches a structure that will cause a disruption of the light beams upon insertion or removal of a circuit board. The following are facts, not possibilities or conjecture, disclosed by Hamanaka. FIG. 2 shows a bottom cross-hatched portion of the circuit board 11 extending below the window 11a. Importantly, FIG. 2 is described in the Brief Description of the Drawings section of Hamanaka as "an enlarged fragmentary cross-sectional view of the electronic circuit board showing in FIG. 1, the view being taken along an optical path." Emphasis added. It will be noted that the optical beam A - A' as seen in FIG. 2 is shown in the plane which includes the bottom portion of the circuit board. Since the plane of FIG. 2 is the optical plane and the bottom section of the circuit board is shown cross-hatched just like the upper section of the circuit board, one of ordinary skill in the art would understand that a portion of the circuit board extends under the optical window.

This makes it clear that the bottom portion of the circuit board as seen in FIG. 2 extends beneath the optical window 11a and the actual optical beams, and hence would cause a disruption of the optical beams upon the board being inserted or removed from a slot in the motherboard.

Therefore, one of ordinary skill in the art would understand based on the disclosed structure of Hamanaka that the optical beams would be disrupted with the insertion into or removal from the motherboard of a printed circuit board. Hence, Hamanaka does not provide a teaching of a required limitation of claim 1 and hence the rejection of claim 1 under 35 U.S.C. 102 should be withdrawn.

Claim 4 further recites a processing unit wherein the removable portion of the processing unit is configured to be replaceable after installation without blocking said beam line. In the Office Action, the only explanation of how Hamanaka teaches this requirement is "as seen in Figure 4". FIG. 4 of Hamanaka merely shows the insertion of a board 10 into a motherboard 20. Nothing about board 10 is intended to be movable or replaceable once it is seated in a slot in the motherboard. Hence, Hamanaka does not support a teaching of the required limitation and does not provide a prima facie ground to support the rejection.

Independent method claim 11 defines a method for installing and removing processing units wherein communications among the processing units is effected by a free space beam line. An aperture is provided in the processing units. The processing units are installed so that the beam line passes through the aperture so as not to block the beam line during the step of installing. As explained above with regard to claim 1, the Hamanaka reference discloses a board having a configuration that will cause a disruption of optical beam lines carried through the motherboard upon the insertion of such a board into its corresponding slot in the motherboard. Thus, Hamanaka does not disclose the required steps of method claim 11 and does not provide a prima facie ground to support the rejection.

Claim 12 describes a moving a movable portion of the processing unit out of a way of the beam line during installation, and replacing it after installation. No such element or teaching is found

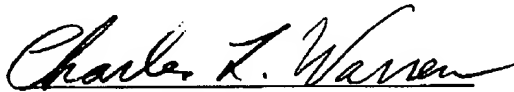
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In view of the above remarks, withdrawal of the rejections and/or reversal of the rejections of all claims pending is respectfully requested.

If a telephone conference would be of assistance in advancing the prosecution of this application, feel free to call applicants' attorney.

Respectfully submitted,



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Dated: November 18, 2005

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